2014 Annual Capacity Development Report to the US Environmental Protection Agency

State Fiscal Year 2014
(July 1, 2013 – June 30, 2014)

State of Nevada
Division of Environmental Protection

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Contents

Background

The Nevada Division of Environmental Protection (NDEP) implements the state's capacity development program (http://ndep.nv.gov/bffwp/dwsrf1_cap_dev.htm). The following annual capacity development implementation report describes the capacity development efforts conducted by the Office of Financial Assistance (OFA), Bureau of Safe Drinking Water (BSDW), Bureau of Water Pollution Control (BWPC), and technical assistance provider – Nevada Rural Water Association (NvRWA), from July 1, 2013 through June 30, 2014, in the administration of the Capacity Development Program.

The capacity development program is funded primarily with set-aside monies from the Drinking Water State Revolving Fund. In developing and implementing this program, the NDEP accomplished tasks in the following areas:

- New Systems Program Annual Reporting Criteria
- Existing System Strategy

A. New Systems Program Annual Reporting Criteria

1. *Has the State's legal authority (statutes/regulations) to implement the New Systems Program changed within the previous reporting year?*

   Nevada's legal authority to implement the New Systems Program did not change during state fiscal year (SFY) 2014.

2. *Have there been any modifications to the State's control points?*

   There have been no modifications to Nevada's control points during SFY14.

3. *List new systems (PWSID & Name) in the State within the past three years and their ETT scores.*

   Figure 1 shows the new systems in the State within the past three years and their ETT scores. A large number of the new systems include the large casinos in Las Vegas. These facilities receive their drinking water from the Las Vegas Valley Water District; however, they are now installing chlorination on site to treat for possible Legionella bacteria.

ACTIVITY STATUS	ACTIVITY DATE	COUNTY	TYPE	PWS ID	PWS NAME	POPULATION	ETT SCORE
A	22-Jul-14	ELKO	NC	NV0004005	LDS LEE RECREATION CAMP	100	
A	15-Jul-14	CLARK	NTNC	NV0001141	WYNN RESORTS	9416	
A	01-Jul-14	LYON	NC	NV0000881	GOLD CANYON CAFE	25	
A	23-Jun-14	CLARK	NTNC	NV0001137	COSMOPOLITAN HOTEL	5534	
A	07-May-14	CLARK	C	NV0000415	ELKHORN WELL ASSOCIATION	32	
A	14-Feb-14	CLARK	NC	NV0004024	LDS CAMP STIMSON	100	
A	30-Dec-13	NYE	NC	NV0003035	THE HUBB	25	1
A	19-Dec-13	NYE	NC	NV0000386	TOWER PIZZA	25	
A	07-Nov-13	WASHOE	NC	NV0004065	WASHOE VALLEY MEETINGHOUSE FACILITY LDS	100	20
A	17-Oct-13	WASHOE	NTNC	NV0001132	RENO TECHNOLOGY PARK WATER COMPANY	30	
A	17-Sep-13	EUREKA	C	NV0000414	THE LODGE AT PINE VALLEY	320	
A	13-Aug-13	WHITE PINE	NC	NV0001135	WHIPPLES COUNTRY STORE	25	5
A	08-Aug-13	LYON	NTNC	NV0001133	PUMPKIN HOLLOW	45	3
A	05-Aug-13	CLARK	NC	NV0001101	NDOT SEARCHLIGHT WELCOME CENTER	50	
A	05-Aug-13	WHITE PINE	NC	NV0003046	WARD MOUNTAIN CAMPGROUND USFS	600	
A	23-Jul-13	STOREY	NTNC	NV0000413	COMSTOCK MINING	45	1
A	26-Jun-13	CLARK	NTNC	NV0001127	POLO TOWERS	2300	2
A	12-Jun-13	DOUGLAS	NC	NV0002041	BEST WESTERN TOPAZ LAKE INN	300	15
A	07-Jun-13	MINERAL	NC	NV0001128	WILDKAT RANCH	25	
A	07-May-13	DOUGLAS	NTNC	NV0002227	THE CLUB AT CLEAR CREEK TAHOE	25	
A	18-Apr-13	NYE	NC	NV0002555	CHAMPIONS	25	
A	15-Apr-13	ELKO	NC	NV0001092	RYNDON COUNTRY STORE LLC	25	
A	19-Mar-13	LYON	C	NV0000411	PERI AND SONS FARM LABOR HOUSING	1148	25
A	19-Feb-13	LYON	NC	NV0004040	STAGECOACH MARKET	25	
A	06-Feb-13	NYE	NTNC	NV0001122	ROUND MOUNTAIN GOLD HILL WATER SYSTEM	250	
A	14-Jan-13	PERSHING	NC	NV0001125	HUMBOLDT RIVER RANCH ASSOCIATION	150	
A	10-Jan-13	ELKO	NTNC	NV0001126	WEST END WATER COOP ASSOC	25	1
A	06-Dec-12	LYON	NC	NV0000341	CARMENS MEXICAN RESTAURANT	25	1
A	08-Nov-12	NYE	C	NV0002571	RANCHO VISTA 4	25	7
A	03-Oct-12	CLARK	NTNC	NV0001121	MGM GRAND HOTEL AND CASINO	7500	
A	10-Sep-12	NYE	NC	NV0000829	SULLIVANS PUB	25	
A	16-Aug-12	CLARK	NTNC	NV0001120	MIRAGE RESORT AND CASINO	4400	
A	08-Aug-12	CLARK	NTNC	NV0001119	MANDALAY BAY RESORT AND CASINO	5549	
A	26-Jul-12	CLARK	NTNC	NV0001118	MONTE CARLO RESORT AND CASINO	1980	
A	25-Jul-12	CLARK	NTNC	NV0001117	BELLAGIO RESORT AND CASINO	8171	
A	03-Jul-12	CLARK	NTNC	NV0001107	KAPEX WATER SYSTEM CITY OF NLV	25	
A	22-Jun-12	CLARK	C	NV0001116	SIGNATURE TOWERS	516	
A	22-Jun-12	CLARK	NTNC	NV0001114	EXCALIBUR RESORT AND CASINO	2607	
A	22-Jun-12	CLARK	NTNC	NV0001113	CIRCUS CIRCUS CASINO	2668	
A	09-May-12	CLARK	NTNC	NV0001111	LUXOR RESORT AND CASINO	3196	
A	09-May-12	CLARK	NTNC	NV0001112	NEW YORK NEW YORK HOTEL AND CASINO	2000	
A	02-Apr-12	CLARK	C	NV0001109	CITY CENTER RESIDENCES	808	
A	24-Feb-12	WHITE PINE	NTNC	NV0000982	BALD MOUNTAIN MINE	110	1
A	17-Nov-11	HUMBOLDT	NTNC	NV0001103	MARIGOLD MINE POTABLE WATER SYSTEM	300	
A	26-Oct-11	CLARK	NC	NV0001024	CORN CREEK FIELD STATION USFS	25	
A	14-Oct-11	WHITE PINE	NC	NV0003053	BIRD CREEK CAMPGROUND USFS	30	
A	07-Oct-11	CLARK	NTNC	NV0001106	CITY CENTER HOTELS	8900	
A	15-Sep-11	NYE	NC	NV0001105	ORCHARD VALLEY MARKET	25	6

Figure 1. New water systems within Nevada in the last 3 years.

B. Existing System Strategy

1. *In referencing the State's approved existing systems strategy, which programs, tools, and/or activities were used, and how did each assist existing PWS's in acquiring and maintaining TMF capacity? Discuss the target audience these activities have been directed towards.*

   Helping water systems develop and maintain capacity is the backbone of the Capacity Development Strategy. Many water systems throughout Nevada have increased their capacity through the technical assistance program. In SFY14, NDEP contracted with the NvRWA to provide technical assistance to small water systems. The technical assistance program provides "targeted" assistance by focusing on specific issues or problem areas. Specific assistance to small water systems is shown in Attachment 1. Some of the more recent program highlights are described below.

Compliance with the Safe Drinking Water Act

Our state capacity development coordinators and technical assistance providers work closely with state enforcement staff and review the ETT list provided each quarter to identify systems that lack TMF capacity and to determine steps to help the system return to compliance in a timely manner. With funding provided through the DWSRF small systems technical assistance contract, NvRWA focuses on systems with less than 11 threshold "points" to help keep them off the ETT list altogether. Through this process, Nevada has made significant progress in assisting water systems return to compliance. As shown in Figure 2 below, non-compliance has been decreasing since inception of the ETT. The percent of community water systems in compliance with maximum contaminant levels (MCLs) was 89 percent in FY14 and the percent of population served by community water systems in compliance with MCLs was 99 percent in FY14.

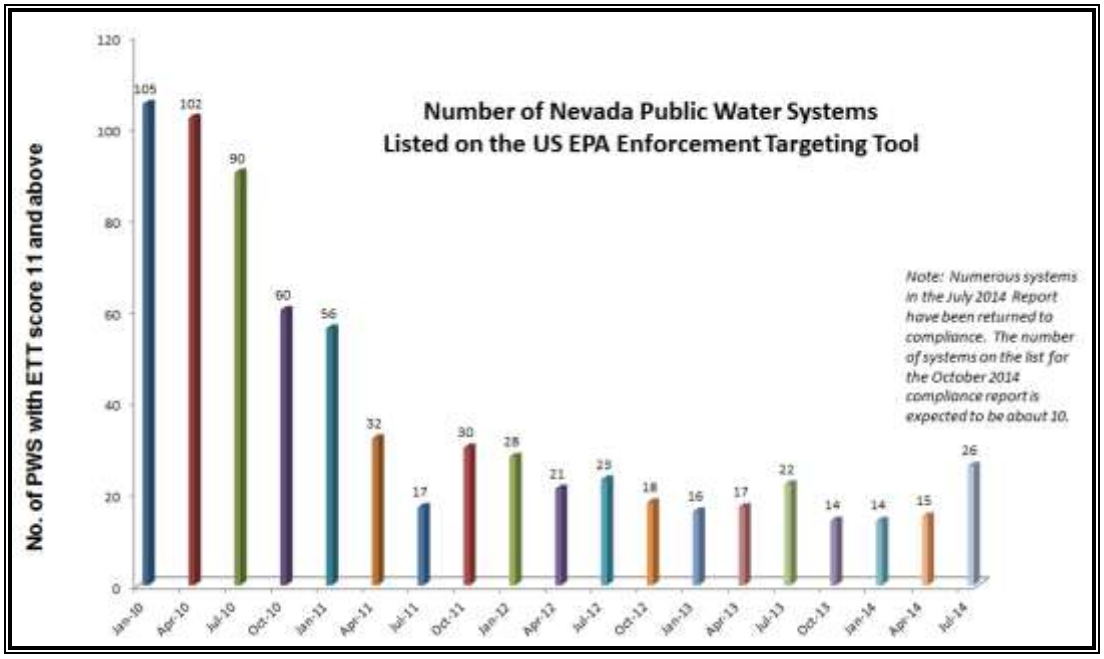

Figure 2. ETT Tracking Over Time

Capacity Assessments

Capacity assessments are useful tools for water systems to measure their strengths and identify weaknesses and are also useful tools for state staff and technical assistance providers to identify the most appropriate assistance for water systems. In 2012, Nevada revised its capacity assessment form to make the evaluation less subjective and improve our ability to measure outcomes of the technical assistance we provide to water systems. The revised form is available on our website at:
http://ndep.nv.gov/bffwp/docs/nv_tmf_capacity_survey_fy12.pdf

Capacity assessments revealed the following common deficiencies among small water systems:

- Limited maps of water systems
- Lacking plans for Operation & Maintenance, Emergency Response, Cross Connection Control and Capital Improvement
- Routine maintenance is lacking
- Under-staffed and under-funded operations

Nevada is making a special effort to assist systems with these common deficiencies while also continuing to provide assistance to systems for compliance issues, distribution and treatment training, and other TMF capacity development.

Cross-Connection Control, Emergency Restoration, & Operation & Maintenance

Public Drinking Water systems in Nevada are required to have site-specific plans approved by BSDW for cross-connection control and operations and maintenance; and have a plan for restoration of services in an emergency. Water systems are also required to have a water conservation plan that must be updated every five years and be approved by the Nevada State Engineer's Office. In the past year NvRWA assisted three (3) small water systems with these plans. This was accomplished by working closely with system personnel so that they could gain working knowledge and ownership of their site-specific plans. Water loss auditing is an important component of conservation, and four (4) systems received hands-on assistance to identify leaks and training in the leak detection and water loss calculation.

Developing operation and maintenance plans and cross-connection control plans provides staff with an opportunity to systematically examine their customers' and their own facilities. Nationwide, cross-connections represent the single largest source of contamination of drinking water. Cross-connection control plans provide the framework for the control of potential flow of contaminated liquids by back-siphoning or back-pressure into the drinking water distribution system. Systems with plans in place are ready to take the next step to implement their local plan. The challenge is in moving from no program to a costly device installation and testing scenario, which by-and-large impacts businesses. Future efforts will continue to be multi-phased and include: updating plans, additional training for system staff and local governing boards, conducting public education, and finding community-appropriate ways to carry out

implementation. DWSRF staff is looking at innovative loan solutions to ease the financial burden of implementation.

"Emergency" means a situation in which an unusual calamity, including a flood, fire, storm, earthquake, drought, civil disturbance, accidental spill of a hazardous material or similar occurrence, disrupts the provision of water or endangers the quality of water provided by a public water system. Emergency restoration plans provide a framework for dealing with emergencies. The planning exercise is valuable, in itself, as participants gain greater understanding of system vulnerabilities and develop action plans for dealing with unusual conditions. A greater understanding of system responsibilities under the Public Notification Rule is one outcome of this planning process. Testing the plans by conducting tabletop exercises is another way technical assistance providers increase water systems' preparedness.

Water System Mapping

Nevada recognizes that as operators retire, a wealth of system knowledge goes with them and may be, largely, undocumented. In addition, capacity assessments revealed that many water systems had limited mapping of their systems and assets. Maps are critical for basic operations and maintenance, cross-connection control, water conservation, and emergency response. Systems with the highest TMF capacity have digital utility maps, on-hand, of the entire service area that include the location of each water source, treatment facility, pumping station, reservoir, pressure zone, control and isolation valve, hydrant, and meter. Some of these also include future growth areas.

In order to take advantage of available information technologies and to capture and transfer institutional knowledge and outdated paper maps to electronic media, technical assistance is being provided to small water systems to create electronic system maps and asset databases. In the past year, NvRWA worked with seven (7) small water systems in an effort to assist them in identifying their assets and getting them mapped, at no charge, as a part of the DWSRF technical assistance outreach. Most of these systems started with very little knowledge of the technology available to them.

The focus of this work involves the use of Global Positioning System (GPS) technology for field data collection and Geographic Information Systems (GISs) for development of databases that capture information that can then be transformed into digital system maps. Compared to using paper maps or having data located at an off-site, consulting engineer office, this approach provides local staff with immediate access to their data and promotes a sense of ownership. Simple, low-cost methods are used to develop a system image that is linked to database tables containing component documentation. Water system personnel are then able to, on their own, update the digital maps by adding components such as pipe lines, valves, hydrants, production and storage facilities, and customer meters. Digital map systems can be used in the field to provide a seamless linkage between maps and day-to-day maintenance management. These systems also provide a platform for asset management and capital improvement planning. Once a GIS is set up, the updating process can be as simple as entering information in a spreadsheet. There is nobody better informed about the water system than the people that

are actually working on it. Giving water utilities ownership of their GIS is the best way to assure it remains accurate and up to date.

Compliance Assistance & Other General Technical Assistance

Five (5) systems received direct assistance to resolve deficiencies identified in Sanitary Surveys, and two (2) were guided through pre-sanitary surveys so that they could see their system from a public health perspective. Assistance was provided to twenty-nine (29) systems to deal with mechanical-electrical problems, water quality or monitoring issues, and general operations. Working closely with the staff at each system, NvRWA provided hands-on assistance or guidance with troubleshooting, made recommendations for repairs, and helped to identify parts, materials, or actions needed. By working alongside experienced technical assistance providers, system operators gained a deeper knowledge of troubleshooting techniques and of the equipment installed in their facilities, including where to obtain supplies. Where sanitary deficiencies or water quality/monitoring issues needed to be addressed, discussion during examination of the deficiency instilled greater understanding of the concept of sanitation for public health protection. System staff also gained working knowledge of BSDW's Public Water System Supervision Program, interacting with the primacy agency, and their system's Enforcement Targeting Tool status (ETT – the new points-based compliance system).

The success or failure of a water system often depends on the knowledge and experience of its board. The board, working through the operations staff, is ultimately responsible for ensuring that they distribute water that is safe to drink. In addition to the board, administrative staff directly interact with and support operations. Eleven (11) systems received training and assistance at the board and administrative levels to enhance understanding of their roles in keeping small drinking water systems in compliance and financially viable. The BSDW also works with the Nevada Public Utilities Commission on systems that are overseen by both agencies in order to coordinate technical assistance activities and leverage each agency's authorities.

BSDW and NvRWA staff have actively worked with approximately seven (7) Community and Non-Transient, Non-Community water systems to develop or update Site Sampling Plans for compliance with the Revised Total Coliform Rule and the related Groundwater Rule and public notification requirements. Developing these plans requires educating the water systems on the nuances of the Revised Total Coliform Rule, identifying appropriate sample locations, establishing appropriate sampling schedules, and reviewing the plans once submitted. Working with the system personnel, NvRWA staff reviewed each system layout and walked them through identification of appropriate routine, routine follow-up, and groundwater rule compliance sample sites, then assisted them with development of their own plan for submittal to the BSDW for review and approval. Expanded capacities among these system personnel include: competency about how the rule applies to their system; actions to take in case of positive coliform or E. coli results; timely interaction with the primacy agency; knowledge of the concepts of representative sampling; and the ability to modify their plans as their system grows in the future. With the development of these site sampling plans, the small systems have an additional tool at their disposal in the event of the presence of Total Coliform or E. coli bacteria

in the water system or a water related emergency, including effective public notification language and methods.

In addition, during this period, an updated protocol for field testing disinfectant residual in drinking water was implemented by BSDW for all systems that use chlorine. NvRWA supplemented BSDW's roll-out effort by assisting nine (9) systems to put the detailed procedures into practice.

Operator Training and Certification

Nevada currently has 578 public water systems. These systems include: 214 community water systems; 125 non-transient, non-community water systems; and 239 transient, non-community water systems. Nevada requires all community and non-transient, non-community public water systems to have certified operators; a total of 339 systems. Transient non-community water systems that use surface water or groundwater under the direct influence of surface water must also be operated by a certified operator. Compliance with the operator certification requirements for all water systems statewide is at 98.53 percent.

The NvRWA is instrumental in providing training to small, rural water systems. With funding from the DWSRF technical assistance contract, NvRWA provides operator training using remote video-conferencing. This method of offering training has been very successful in part because it meets the needs of a very specific audience, the very small system operators (those that serve between 25-100 customers). The sessions are broadcast to sites all over the state and offer the advantage of being interactive training that is relevant and cost-effective; requiring minimal travel for the participants. Sessions are broadcast monthly and include a wide array of topics (e.g., *Water Operator Principles - Distribution & Treatment, Practical Steps in Conducting Your Water Audit, Financial Accounting for Small Utilities, Basic Chemistry for Water Operators, GIS for Rural Water Utilities*).

In addition to the video-conferencing, NvRWA hosts an annual spring conference in Reno to provide training and general information to water system operators, managers, and board members. The class sessions and vendor displays at this conference give operators information on up-to-date equipment and methods in the industry and focused training in distribution and treatment systems. The conference also helps to prepare operators for certification testing. The technical assistance contract with NvRWA also provides scholarship money to operators to assure that they are able to attend the spring conference and gain the benefits of the certification training and testing. In order to help meet local small system needs, training for Backflow Assembly Tester certification has also been funded using this method.

NDEP has also funded the NvRWA to provide both group and individual operator training at the operator's water system. Training topics are selected depending on system needs, and often topics are requested by system managers. These sessions are open to any interested individual, and staff from nearby systems often participate. This and other training has been instrumental in helping individuals become certified, including many who needed treatment operator certification as a result of arsenic treatment being implemented at their systems.

In 2013, BSDW worked with technical assistance providers (Nevada Rural Water Association [NvRWA], Environmental Finance Center [EFC], and Texas A&M Engineering Extension Service [TEEX]) funded through EPA grants for the Small System Training and Technical Assistance Initiative. NvRWA utilized the funds on a one-on-one basis to assist systems primarily with technical issues. The EFC focused on managerial and financial capacity training through a workshop and follow-up one-on-one assistance. TEEX provided class-based Safe Drinking Water Act training throughout Nevada.

BSDW is in the process of applying to the Department of Veterans Affairs (VA) for Program recognition in order to allow veterans and other eligible persons the valuable opportunity for reimbursement of licensing and certification exams. If approved, these operators will be able to receive testing fee reimbursement from the VA. Water Operator careers are a perfect fit for applying the skills learned from certain Military Operating Specialties to civilian jobs. Employing veterans in the role of water system treatment operators and water system distribution operators would provide the opportunity for veterans to continue their careers by being responsible for the operation and maintenance of the water systems that provide safe drinking water to citizens of Nevada.

The Nevada Water and Wastewater Operators Forum (Forum) is hosted by the BSDW and supports the protection of human health and the environment through collaboration among water and wastewater system operators and the NDEP. The goal of the Forum is to continue to build on the foundation created by the Nevada Water Operator Certification Advisory Board, the Nevada Certified Drinking Water Operators Forum, and the Nevada Water and Wastewater Training Coalition. Participants in the Forum openly identify and constructively discuss issues regarding the education, training, and testing of water system operators in Nevada, coordinate project efforts and disseminate information, and enhance public input by providing an open access collaborative forum for the exchange of information. The Forum provides a regular mechanism for communication among the regulated community of certified operators, the American Water Works Association, NDEP, and others. BSDW hosts a webpage for the Forum at http://ndep.nv.gov/dwo/index.html and supports the administration needs of the entity.

Integrated Source Water Protection/Wellhead Protection

Groundwater is the source of drinking water for approximately 90 percent of Nevada's public water systems. To assist public water systems and local communities in protecting groundwater from contamination, Nevada is implementing a multi-faceted Integrated Source Water Protection Program ("ISWPP", formerly referred to as the "Wellhead Protection Program" or "WHPP"). It is Nevada's belief that effective source water protection must be developed and administered by the community in conjunction with local water suppliers. A local plan should be a long-term commitment on the part of the community to protect its drinking water sources from becoming contaminated or polluted by various land use activities.

The BWPC administers the ISWPP, which provides assistance to communities in the development and implementation of Community Source Water Protection Plans (CSWPPs). Local CSWPPs are developed through a county-wide planning and coordination approach which provides a framework for all public water systems within a specific county to work together to

examine shared water sources, evaluate community development impacts to those sources, and discuss how to collectively manage potential risks from a broader perspective. The ISWPP's multi-jurisdictional approach provides opportunities for public water systems ranging from very small taverns and mobile home parks to larger districts and municipalities to pool resources and promote community-wide awareness and acceptance of the plan. This ultimately increases opportunities for small public water systems with limited resources and/or capacity to be included under a more comprehensive CSWPP and implementation effort.

Since the inception of the State's Wellhead Protection Program in 1994 through the recent implementation of the ISWPP, Nevada has assisted in the development of 77 wellhead/source water protection plans, covering 232 of 578 public water systems in Nevada. The success of the ISWPP and local CSWPP plan development depends on the establishment of engaged local planning teams; they represent the water systems, local planning agencies, and other stakeholders throughout each county. Each team must be structured so that it adequately represents the community's public water systems and planning agencies. A representative team allows for more transparency of the planning effort and brings credibility when presenting the plan to community leaders. It is also imperative that the teams are committed for the entire plan development process, which on average takes approximately two years. The time it takes to complete a plan may vary depending upon the county's population, geographic size, resource availability, and commitment.

The ISWPP assists communities in developing engaged and committed local planning teams by dedicating resources upfront to provide outreach and education to the local governing boards and public water systems through presentations at their regularly scheduled meetings. The presentations outline the ISWPP planning goals and highlight local planning benefits should the community chose to participate. The ISWPP emphasizes that the planning effort is voluntary, and provides a mutual benefit for the State and local communities. The goal of the Program planning horizon is to overlap the technical assistance into neighboring counties to allow for regional coordination and to maximize funds dedicated to travel expenses. However, ISWPP is also flexible in working in other communities based on demonstrated needs, local planning momentum, and resource availability.

Previously, the Wellhead Protection Program provided financial assistance to public water systems and communities through the annual Request for Proposal (RFP) process. Since the ISWPP was refocused in 2009, NDEP has opted to contract directly with a technical contractor through the RFP process, which occurs every two to four years. The contractor works directly with the community in coordinating plan development and is required to demonstrate technical and planning experience in working with local planning communities. Strong leadership skills are crucial to facilitate multi-jurisdictional team meetings and to promote a cooperative and productive environment.

The current ISWPP planning schedule and funding allocations allow every public water system in the State of Nevada an opportunity to participate in the planning process over the 12 to 15-year cycle. In addition, the program planning schedule goal is to provide assistance for up to three counties at a time; approximately two years of technical assistance is dedicated for each

county to include team building, plan development and implementation, and promoting community acceptance of the plan.

Nevada's local community boards may send a letter to NDEP requesting assistance. The letter must demonstrate a commitment to dedicating appropriate staff to participate in local planning teams and attend regular meetings. This ensures that staff has the resources and support to commit to plan development.

The BSDW Vulnerability Assessment and waiver program shares information with the ISWPP that is collected to document Potential Contaminant Sources (PCS) for water systems that rely on groundwater. The Vulnerability Assessment reports document PCS and rank them for potential to adversely impact a water supply source. Initial project implementation efforts were funded by the American Recovery and Reinvestment Act set-asides and continue with a combination of resources including the Wellhead Protection DWSRF set-aside.

For more information on Nevada's ISWPP visit our website at:
http://ndep.nv.gov/bwpc/sourcewater.htm

Between 2009 and 2014, the ISWPP assisted five counties in developing and implementing plans which covered all regulated public water systems within the respective counties. Douglas County served as the State's pilot community. In the spring of 2012, the Douglas County CSWPP (plan) was unanimously adopted by the Douglas County Regional Planning Commission and the Board of County Commissioners. This plan was incorporated into the County's Master Plan to ensure it being implemented in future planning activities. The plan covers all regulated public water systems in the Carson Valley. The plan covers a population of approximately 34,000. The Lake Tahoe water systems are excluded because they are already a highly regulated community under the Watershed Control Program administered by NDEP's Bureau of Safe Drinking Water.

Four other counties - White Pine, Nye, Lyon, and Carson City - were cycled into the planning schedule following Douglas County's planning momentum. The White Pine and Nye County Boards of County Commissioners adopted their plans in 2012 and are currently implementing them. White Pine County's Community Source Water Protection Program was awarded the American Water Works Association's California-Nevada Exemplary Source Water Protection Award in 2012 for their efforts in the development and implementation of the strategies to protect both the quantity and quality of the community drinking resource.

In the summer of 2012, a new technical contractor was selected to provide community assistance under the ISWPP. Lyon County and Carson City are currently receiving planning assistance. In June 2014, the Lyon County Board of Commissioners adopted the Countywide Source Water Protection Plan. In addition, local entities within Lyon County have adopted measures to protect drinking water source through code and ordinance development. The technical contractor is completing work with Carson City in updating and implementing measures to protect drinking water sources for the community. The Carson City Board of

Supervisors is scheduled to vote on the updated community source water protection plan in September 2014.

Under the ISWPP, each community has developed various management strategies to further protect their drinking water resources. During the plan development stage, each community developed Geographic Information Systems (GIS) mapping tools which show the communities source water protection areas relative to local land uses. The tool can assist the local agencies in making more informed planning decisions with regard to potential impacts to the community's drinking water sources.

Douglas County, Lyon County, and Carson City decided use a GIS Flex Viewer web based tool. The tool was designed to enable multiple local agencies online access to the maps to consider projects or developments which are within a designated protection area. In addition, with these added GIS capabilities, the City of Fernley in Lyon County has implemented code which requires developments to obtain a special use permit. The permit requires the development to demonstrate compliance with all Federal, State and local permits in effect. Other communities are in the process of drafting similar ordinances and code.

In addition, many of the communities' programs under the ISWPP have developed sixth grade science curriculums as an educational component to their SWP programs. The curriculum is included in the earth science kits and includes basic understanding of where drinking water comes from in Nevada (within their particular community), groundwater concepts, point source and non-point sources of pollution, and the water cycle. The ground and surface water models are taken to the classrooms as visual aids for both the teachers and students.

ISWPP staff is working with the technical contractor to reach out to additional communities for the 2014-2016 planning cycle. Communities being considered for assistance in the next two-year planning cycle include Humboldt County, Churchill County and Pershing County.

Sustainable Infrastructure

The EPA's *Clean Water and Drinking Water Infrastructure Gap Analysis (2002)* estimated that if capital investment and operations and maintenance remained at current levels, the potential funding shortfall for drinking water and wastewater infrastructure could exceed $500 billion by 2020. To address the funding gap, the EPA launched the *Sustainable Water Infrastructure Initiative*. The Sustainable Infrastructure Initiative will guide efforts in changing how the nation views, values, manages, and invests in its water infrastructure. Nevada's capacity development efforts support the EPA's sustainable infrastructure priorities:

- Better Management
- Full Cost Pricing
- Water & Energy Efficiency
- The Watershed Approach

Nevada's Capacity Development Program addresses, to some degree, all four of these areas. Nevada has recognized that good management is critical to a well-functioning utility. Nevada

offers technical assistance in the form of Board training to assist in better management. In terms of full cost pricing, Nevada's technical assistance providers have completed a number of rate studies for water systems and presented the findings to the governing boards and the public. Being the driest state in the U.S., Nevada has long recognized the value of water. The Nevada Division of Water Resources requires that every water system submit a Water Conservation Plan that includes measures to evaluate the effectiveness of the plan. Technical assistance providers have helped a number of communities prepare and update these plans. In addition to user-based conservation measures, systems are being educated to audit and chart the amounts of water produced and sold on a monthly basis. Boards are being informed to ask for this information each month. Once usage patterns are established, changes in use will prompt managers to implement leak detection studies. NvRWA trains water system staff on electronic and acoustic leak detection equipment specifically to enhance their technical capacity by being up-to-date on detection technologies, while also locating any leaks real-time. Control of leakage in water systems not only saves water but pumping costs and energy. Although the concept of "Watershed Approach" is more focused on management of pollution sources, Nevada's Integrated Source Water Protection Program also fits into this concept.

Funding

The Drinking Water State Revolving Fund (DWSRF) provides low interest loans to both publicly and privately owned water utilities. As part of the DWSRF, Nevada has created a "disadvantaged community" program to address low income areas that have infrastructure deficiencies that pose a health threat. The Nevada Administrative Code defines a disadvantaged community as an area served by a public water system in which the average income per household is less than 80 percent of the median household income of the state. Starting in 2009, the federal appropriations for the DWSRF required that the state use a percentage of its grant to provide additional subsidy to eligible recipients in the form of forgiveness of principal, negative interest loans, or grants or any combination of these. Water systems that qualify for the disadvantaged program may be eligible for this additional subsidy. The additional subsidy requirements allowed resolution of many of the acute and chronic health risk needs. With the most serious health risks addressed, NDEP expanded subsidy eligibility criteria to include small system consolidation with larger systems. The subsidy program has funded seven projects totaling approximately two million dollars in SFY14. The terms and amount of the additional subsidy are determined on a case by case basis based on the individual community's financial situation.

Nevada, as a whole, recognizes that the needs associated with infrastructure deficiencies are increasing while many federal and state funding resources are dwindling. Collaboration between the major funding agencies in the state was initiated in 2006. NDEP hosts a webpage for the joint funders group at http://ndep.nv.gov/bffwp/nwwpa.htm. This site offers a "pre-application" common to all of the funders that makes coordination and communication between the funding agencies and applicants simple and allows the funding agencies to suggest funding solutions that are most appropriate for the communities while leveraging all of the funding available in the state.

Challenges

Impact of the drinking water standard for arsenic on Nevada

In medical studies, arsenic ingestion has been linked to both cancerous and non-cancerous health effects. Arsenic was one of the first regulated drinking water contaminants. On December 24, 1975, under the authority of the Safe Drinking Water Act (SDWA) of 1974, the EPA issued a National Interim Primary Drinking Water Regulation for arsenic of 0.05 mg/L (50 ppb). On January 23, 2001, the arsenic MCL was lowered to 0.010 mg/L (10 ppb) and the standard became enforceable on January 23, 2006.

113 public water systems in Nevada, approximately 35 percent, were impacted by the new standard when compliance determinations were made in 2005. A few systems have since been added to the list based on more recent arsenic data. The Safe Drinking Water Act and Nevada Administrative Code, provided eligible systems exemptions to the standard when it changed; allowing them more time to comply. For some systems with small populations and low arsenic concentrations, final compliance deadlines could be pushed back to January 23, 2015. All exemption requests were reviewed and approved by the State Environmental Commission.

As of August 2014, 100 affected water systems have met their compliance requirements through treatment or non-treatment solutions. This is an improvement from the 96 systems that had achieved compliance as of July 2011. Exemptions are in place for ten (10) remaining systems that will expire January 23, 2015; although some of these systems have since demonstrated compliance with the arsenic standard, others have needed more time to finalize and construct solution. Eight (8) systems in violation of the drinking water standard are working to achieve compliance under a BSDW enforcement approach. Approaches generally include an Administrative Order (unilateral in nature) or a mutually-negotiated Administrative Order on Consent. Both approaches outline a water system's compliance timeframes and place them on a path to compliance. The systems on the Arsenic Rule Compliance Status List, included as Attachment 2, either have an executed Order or are in the queue for establishing one. There is one (1) additional system that is not in compliance with the standard but is working on a compliance solution in concert with BSDW staff currently using an approach other than formal enforcement.

The cost impact of the new arsenic standard has been significant. Many systems were not prepared financially or otherwise to meet their compliance deadlines. Funding for arsenic mitigation projects from the State of Nevada is nearly $82,000,000 – with grant funding assistance to water systems from the State Capital Improvements Grant Program totaling approximately $20,000,000 and funding from the Drinking Water State Revolving Loan Fund (both regular loans and principal forgiveness loans) totaling approximately $62,000,000 to date. Systems also received funding for arsenic mitigation in the form of loans and grants from the US Department of Agriculture – Rural Development, Community Development Block Grants and the US Army Corps of Engineers. Systems faced many hurdles pertaining to regulatory requirements, exemption options and processes, compliance options, treatment options, cost impacts, funding options and strategic planning. Ongoing costs for operations and maintenance vary widely depending on system size, treatment type and chemical addition needed, and water usage.

In addition, the requirements for operator certification increased. Previously, systems that only consisted of water storage and distribution were not required to have a treatment-certified operator. Systems that now employ treatment must have a treatment-certified operator, and the more complex the treatment, the higher the certification level required. This, too, has increased the long-term costs of operation.

Drought

The summer of 2014 is revealing the effects of ongoing drought. A few communities are experiencing a drop in groundwater levels that are affecting operation of wells or flow from springs. Improving system capacity includes discussions related to predicting potential drought impacts and planning responses before the situation becomes critical.

Secondary Disinfection

Facilities with large-premise plumbing networks are choosing to add disinfection to incoming municipal water supplies for Legionella and other microbial controls. Adding this disinfection treatment requires that they be regulated as public water systems. Beginning with activation of the City Center Hotels in Las Vegas in 2011, thirteen (13) systems in Nevada's hospitality industry are now regulated. These properties are a challenge for BSDW as they never contemplated being regulated as water systems. This sector continues to grow and is expected to include the health care industry, as well, in coming years.

Managerial Capacity

Despite the evolution and maturing of Nevada's Capacity Development Program, the greatest areas of weakness in rural Nevada continue to be in managerial capacity. Managerial capacity is directly affected by the individual water system operators, managers and board members. Nevada has some very small water systems (31% of the community water systems in Nevada serve a population less than 100 people) and often there is not even one full time employee. Finding and retaining qualified and experienced water system operators, managers and board members is limited in rural areas and may be attributed to the following causes:

- Aging Workforce. There have been several published reports regarding the aging workforce in the water industry and the lack of qualified professionals to succeed those that are retiring.
- Salaries. Due to the competition in the marketplace, rural water systems typically do not offer enough money to attract experienced operators and managers. They will usually settle for someone less qualified that will work for a lower wage. This in turn affects the managerial capacity of the water system.
- Board Members without Utility Backgrounds. In rural communities, water systems are fortunate to find enough individuals to serve on a board. Many board members in rural areas lack a fundamental understanding of water system operations, finance, and management. This can be overcome where an experienced water system manager is in place, but when the manager is lacking experience, this situation can be problematic. Unfortunately, some boards tend to micro-manage water systems, and when they lack the

appropriate background or experience this can lead to a serious decline in the capacity of a water system.

Water systems that are led by a capable, experienced manager, who are supported by a competent and progressive governing board, tend to have high capacity in all areas. On the other hand, water systems that are led by managers with little experience or technical ability who report to an unsupportive or uninformed board tend to struggle with capacity in many areas.

The Future

As the capacity development program grows and evolves, lessons learned have resulted in a program that continues to improve and better serve the needs of Nevada's water systems. From the beginning of the program, Nevada has maintained that the Capacity Development Strategy is a 'living' document and will be revised as needed. Although the Strategy document, itself, has not been revised, the method of implementation of the Strategy has evolved.

While all systems are unique, the vast majority of water systems in Nevada still need particular assistance with managerial and financial principles and planning. Full cost pricing is required in order for a water system to fully function as it should. Operation and maintenance activities, such as valve exercising and line flushing, are also important to extending the life of the infrastructure and maintaining high water quality.

Proper management of infrastructure assets is critical to sustainability. Although the concept of managing assets is relatively simple, many water utilities do not understand how to design and implement an effective asset management program. Managing a utility effectively requires a proactive approach to managing infrastructure assets. The primary objective of asset management is to manage system assets in a way that meets long-term service requirements reliably and cost-effectively. Future technical assistance efforts will include asset management training and assistance to:

- develop a record of their assets & create a tailored asset management plan
- perform all required maintenance tasks
- understand their financial situation and assure proper rates are in place to keep the water system sustainable and provide the level of service expected by customers

There are new requirements and issues that will challenge many Nevada water systems in the coming years. Among them are the Stage 2 Disinfectants and Disinfection Byproducts Rule, the Groundwater Rule, the Revised Total Coliform Rule, impacts caused by growing or declining populations, the need to conserve the State's precious water resources, and finding qualified professionals in the water industry. The focus of technical assistance over the near term will be on the critical issues that are identified above.

2. *Based on the existing system strategy, how has the State continued to identify systems in need of capacity development assistance?*

Compliance problems, sanitary survey deficiencies, requests for technical assistance, and capacity surveys are all used to identify systems in need of capacity development assistance.

3. *During the reporting period, if statewide PWS capacity concerns or capacity development needs (TMF) have been identified, what was the State's approach in offering and/or providing assistance?*

   Technical assistance has been offered both by state staff and through third party contractors (see technical assistance section above).

4. *If the State performed a review of implementation of the existing systems strategy during the previous year, discuss the review and how findings have been or may be addressed.*

   Nevada evaluates the effectiveness of the existing systems strategy on an ongoing basis and adjusts the program when needed improvements are identified.

5. *Did the State make any modifications to the existing system strategy?*

   No changes to Nevada's Capacity Strategy were made during SFY14.

ATTACHMENT 1 –Technical Assistance
Provided by Nevada Rural Water Association

Technical Assistance provided by Nevada Rural Water Association (Components A & B)

The following list identifies the initiation of technical assistance. Completion of assistance may take longer than one quarter.

	Water System Name	Description of Assistance
	Jul-Sep 2013	
1	Trout Canyon	Emergency response to forest fire damage - activated NVWARN & coordinated repairs with LVVWD
2	Storey County (Virginia City)	MHI survey
3	Panaca Farmstead Water Association	Assisted with mapping required by PUC
4	Dutchman Acres	Assisted with ArcGIS online map layers
5	Virgin Valley Water District	Assisted with ArcGIS coordination of data with utilities layers
6	Alamo Sewer & Water GID	Installed ArcReader & trained operator to edit data tables
7	Pahrump	Training: D3-D4 Operator Certification (9 people, 6 systems, 7 hours)
8	Topaz Ranch Estates GID	Provided information on RFQ for engineering services
9	Cave Lake State Park	Assisted with pre-sanitary and BSDW sanitary surveys
10	Ward Charcoal Ovens State Park	Assisted with pre-sanitary and BSDW sanitary surveys
11	Spirit Mountain	Assisted in preparing RFP for facility improvements
12	McDermitt GID	Assisted with income survey
13	Cave Rock/Skyland (Douglas Co)	Assisted with troubleshooting problems with the reclaim treatment from the membrane WTP
14	Silver Springs Mutual Water Company	Training: Water Math (1 person, 1 system, 4 hours)
15	Orovada	Training: D1 Operator Certification (1 person, 1 system, 1 hour)
	Orovada	Assisted with corrective actions required by the BSDW; prepared CCR for 2013
16	Moapa Valley Water District	Assisted the District with vulnerability assessment/emergency response plan questions
	Silver Springs Mutual Water Company	Training: Basic Operator Math (1 person, 1 system, 1.75 hours)
17	Crystal Trailer Park	Training: Water Distribution Exam Review (1 person, 1 system, 8 hours)
18	Weed Heights	Training: Water Distribution Including: Water Math & Basic Operations (1 person, 1 system, 1.5 hours)
19	Eureka	Training: Distribution & Treatment Review (5 people, 3 systems, 6 hours)
	Oct-Dec 2013	
20	Holbrook Station MHP	Assisted with TCR site sampling plan and other water quality sampling issues
21	Canyon GID	Assisted operator with troubleshooting possible sensor issues at the water treatment plant
22	Walker Lake GID	Assisted with chlorine residual checks and water quality sampling protocols
	Orovada	Assisted with DBP monitoring requirements
23	Cottonwood MHP	Assisted with the development of a TCR site sampling plan; discussed CCC at time of visit
24	Sherry's Steak House	Trained owner on disinfection of well and proper inlet screening to mitigate positive TCRs
25	Rye Patch Travel Center	Assisted with and reviewed progress on compliance issues (TC sampling and other)
	Orovada	Assisted with O&M Plan, ERP, CCCP, and other Board training
26	Winnemucca Farms	Assisted with TCR site sampling plan, Lead & Copper sampling plan, DBP sampling plan, and other water quality sampling requirements
27	Stagecoach GID	Assisted with electrical wiring issues with pump motor
28	Lovelock Meadows Water District	Assistance with succession planning for the GM and review of status of CCC implementation
	Orovada	Assisted with water loss calculations and review of 2010 PER
29	Imlay Water System	Assisted with troubleshooting SCADA
30	Crescent Valley	Reviewed sanitary survey results and ETT score to assist operator
31	Beatty Sewer & Water District	Assisted with Office Manager job description
	Silver Springs Mutual Water Company	Assisted with leak repair
	Lovelock Meadows Water District	Researched and provided backflow information pamphlets/bill stuffers
	Rye Patch Travel Center	Inspected progress of fire suppression system - backflow preventer installed
	Dutchman Acres	Assisted with O&M Plan, ERP, CCCP, CCR and well disinfection & well-to-waste design
32	Lovelock Correctional Center	Inspected severe leakage at the prison water tank and reviewed plans to get water to the prison while the tank is down for service
	Moapa Valley Water District	Assisted District in recovering crashed GIS system
	Virgin Valley Water District	Assisted with organizing the GIS data into a geodatabase for more data storage efficiency
	Moapa Valley Water District	Training: Small Water Systems Operation with Emphasis on Compliance (2 people, 1 system, 5 hours)

Technical Assistance provided by Nevada Rural Water Association (Components A & B)

The following list identifies the initiation of technical assistance. Completion of assistance may take longer than one quarter.

	Water System Name	Description of Assistance
	Oct-Dec 2013	
	Silver Springs Mutual Water Company	Training: D3 Operator Certification Review (3 people, 3 systems, 15 hours)
33	Hawthorne Utilities	Reviewed & consulted on Monitoring Schedules
	Walker Lake GID	Assisted with chlorine injector replacement
	Stagecoach GID	Reviewed water quality sampling requirements for 2013 to assure all testing was completed
34	Zephyr Cove Water Utility District	Assisted with troubleshooting of the HACH colorimeter
	Lovelock Meadows Water District	Instructed on proper completion of Chain of Custody forms for water sampling & checked that all necessary samples were taken
	Virgin Valley Water District	Assisted with the addition of image sector to existing mosaic & adding new points to the geodatabase
35	City of Ely	Training: D3 Operator Certification (1 person, 1 system, 12 hours)
	Silver Springs Mutual Water Company	Training: Small Water Systems Operation (21 people, 12 systems, 5 hours)
	Topaz Ranch Estates GID	Training: Water Math & Distribution System (3 people, 2 systems, 3 hours)
36	Lander Co Sewer & Water Dist 2 (Austin)	Training: T1 & T2 Water Treatment Certification Review (1 person, 1 system, 5.5 hours)
	Hawthorne Utilities	Training: Water Distribution/Treatment Math (5 people, 3 systems, 6 hours)
	Jan-Mar 2014	
37	Gardnerville Ranchos	Assisted with chlorine residual testing
38	Pinion Pines	Assisted with updates to Total Coliform Rule & Ground Water Rule site sampling plans & maps
39	Steamboat Springs	Assisted with O&M manual & sanitary survey system deficiencies
40	Gerlach GID	Reviewed water conservation plan & planned system pressure readings
41	Indian Springs	Assisted with preparation of system maps
	Imlay Water System	Assisted with leak detection - found 2 leaking ARVs
	Moapa Valley Water District	Assisted with transfer and processing of new GPS data
	Virgin Valley Water District	Assisted with transfer and processing of new GPS data
	Walker Lake GID	Assisted with TCR site sampling plan
	Canyon GID	Instructed operator in proper completion of Chain of Custody for water samples
	Dutchman Acres	Assisted with system mapping
	Hawthorne Utilities	Training: Distribution - Treatment Math Review (4 people, 2 systems, 2 sessions of 4 hours = 8 hours)
42	City of Wells	Training: D1-D2 Operator Certification Review (10 people, 5 systems, 3 sessions of 5 hours = 15 hours)
	Hawthorne Utilities	Training: D1-D2 Operator Certification Review (5 people, 3 systems, 4 hours)
43	Tolas Waterworks	Assisted in locating programming services for treatment system reprogramming
	Silver Springs Mutual Water Company	Assisted with updates to the ERP
	Imlay Water System	Assisted with updates to ERP, O&M plan, and system maps
44	Elk Point Country Club	Assisted with O&M manual, ERP, CCCP, water conservation plan, & troubleshooting low chlorine residual
	Moapa Valley Water District	Assisted with converting ArcGIS table to MSExcel format
	Dutchman Acres	Assisted with Annual Reports for PUC
	McDermitt GID	Assisted with new water rate setting (required by DWSRF as a condition of the loan)
	Steamboat Springs	Assisted with system mapping & wellhead protection plan, update of water conservation plan, ERP, CCCP, TRC sample plan, & hydraulic model
45	Silver Knolls Mutual Water Company	Assisted with new water rate setting (required by DWSRF as a condition of the loan)
	Silver Springs Mutual Water Company	Assisted with Cla-Val speed controls & valve adjustment
46	City of Yerington	Training: D1-D2 Operator Certification Review (6 people, 2 systems, 4 hours)
	City of Yerington	Training: D1-D2 Operator Certification Review (7 people, 2 systems, 4 hours)
	Hawthorne Utilities	Training: D1-D2 Operator Certification Review (2 people, 1 system, 4 hours)
	Hawthorne Utilities	Training: D1-D2 Operator Certification Review (1 person, 1 system, 4 hours)
47	Gardnerville	Training: D1 Operator Certification Review (3 people, 2 systems, 3.5 hours)
	City of Yerington	Training: D1-D2 Operator Certification Review (5 people, 1 system, 4 hours)

Technical Assistance provided by Nevada Rural Water Association (Components A & B)

The following list identifies the initiation of technical assistance. Completion of assistance may take longer than one quarter.

	Water System Name	Description of Assistance
	Jan-Mar 2014	
	Gardnerville	Training: D1 Operator Certification Review (3 people, 2 systems, 3.5 hours)
	Hawthorne Utilities	Training: D1-D2 Operator Certification Review (3 people, 2 systems, 4 hours)
	City of Yerington	Training: T1-T2 Operator Certification Review (3 people, 1 system, 4 hours)
	Hawthorne Utilities	Training: D1-D2 Operator Certification Review (3 people, 2 systems, 4 hours)
	Hawthorne Utilities	Training: D1-D2 Operator Certification Review (1 person, 1 system, 4 hours)
	Gardnerville	Training: D1 Operator Certification Review (3 people, 2 systems, 3.5 hours)
	Hawthorne Utilities	Training: D1-D2 Operator Certification Review (1 person, 1 system, 4 hours)
	City of Yerington	Training: D1-D2 & T1-T2 Operator Certification Review (4 people, 1 system, 4 hours)
	Apr-Jun 2014	
48	NV Copper - Pumpkin Hollow	Assisted with bateriological samples & sampling methods
49	Best Western Topaz Inn	Assisted with total coliform sample site plan, sampling procedures, & correction of monitoring/reporting violations
	Lander Co Sewer & Water Dist 2 (Austin)	Assisted with issues that occurred when system lost pressure, assisted with chlorinator repair & total coliform sampling site plan
50	Comstock Mining	Assisted with numerous corrective actions & documents as a result of their first sanitary survey as a NTNC water system
51	McGill-Ruth GID	Assisted with setup of water system maps & data in ArcGIS
52	Lahontan State Park	Assisted with collection of data & water system mapping
	Moapa Valley Water District	Assisted with adding GPS data to meters map
	Panaca Farmstead Water Association	Assisted with GPS data collection & GIS map layer updates
	Comstock Mining	Training: Sampling practices & chlorine residual analysis (1 person, 1 system, 4 hours)
	NV Copper - Pumpkin Hollow	Assisted with numerous corrective actions & documents as a result of their first sanitary survey as a NTNC water system
53	Springwood Equestrian Center	Assisted with numerous system issue, documents, and sampling for this NTNC water system
54	Hollywood Skate	Assisted with ERP, O&M Plan, & CCCP
	Walker Lake GID	Assisted operator with resolution of water quality & low pressure customer complaint
	Silver Springs Mutual Water Company	Reviewed & provided advice on service meter upgrades to touch read
	Topaz Ranch Estates GID	Training: CCR, CCCP, & ERP (2 people, 1 system, 7 hours)
	Topaz Ranch Estates GID	Training: ERP (2 people, 1 system, 2 hours)
	Silver Springs Mutual Water Company	Training: Rebuilding of Cla-Val (2 people, 1 system, 4 hours)
	Comstock Mining	Training: D1 Operator Training with special emphasis on applicable safe drinking water rules & sampling (1 person, 1 system, 5 hours)
	Topaz Ranch Estates GID	Training: Customer complaints (2 people, 1 system, 0.75 hour)
55	Round Mountain PUC (Hadley Subdivision)	Training: Valve operation (2 people, 1 system, 5 hours)
	Hawthorne Utilities	Training: CCR & customer complaints (1 person, 1 system, 3.5 hours)
	Walker Lake GID	Training: CCR (1 person, 1 system, 3.25 hours)
	Hawthorne Utilities	Training: CCR (1 person, 2 systems, 5.75 hours)
56	Mt Rose Bowl HOA	Training: GIS/GPS mapping (1 person, 1 system, 1.5 hours)
	Canyon GID	Training: Operation & repair of backflow valves; troubleshooting failure mechanisms (2 people, 1 system, 2 hours)
	Walker Lake GID	Training: Instruction for any possible water quality customer questions as the new well comes on-line (1 person, 1 system, 3 hours)
57	Sun Valley GID	Training: GIS/GPS mapping (1 person, 1 system, 1.25 hours)
	Beatty Sewer & Water District	Training: Excel & Quickbooks (2 people, 1 system, 4.25 1/4 hours)
	Round Mountain PUC (Hadley Subdivision)	Training: Control Valves (1 person, 1 system, 2.25 hours)
58	Shoshone Estates HOA	Training: System pressure control (1 person, 1 system, 8.25 hours)
	Round Mountain PUC (Hadley Subdivision)	Training: Rebuilding & adjusting booster pump control valve (1 person, 1 system, 7.5 hours)
	Springwood Equestrian Center	Training: Water system training & deficiency correction (1 person, 1 system, 4 hours)
	Hawthorne Utilities	Training: Boil Water Notices & subsequent sampling requirements (1 person, 1 system, 1 hour)
	Walker Lake GID	Training: Stage 2 D/DBP sampling requirements (1 person, 1 system, 1 hour)
59	Town of Minden	Training: GIS/GPS mapping (3 people, 1 system, 2.25 hours)

Technical Assistance provided by Nevada Rural Water Association (Components A & B)

The following list identifies the initiation of technical assistance. Completion of assistance may take longer than one quarter.

	Water System Name	Description of Assistance
	Apr-Jun 2014	
60	City of Fernley	Training: D3 Operator Certification Review (1 person, 1 system, 1 hour)
61	City of West Wendover	Training: GIS/GPS mapping (2 person, 1 system, 1.25 hours)
	Weed Heights	Training: Affinity Laws (1 person, 1 system, 2.5 hours)
62	Riverside Resort & Casino	Consulted on issue with arsenic testing results
63	City of Caliente	Assisted with creating a hard copy of the system GIS database for backup
	City of West Wendover	Assisted City in obtaining system mapping from City engineering firm for transfer to GIS
64	Old River Water Company	Conducted TMF Capacity Survey
	Imlay Water System	Conducted TMF Capacity Survey
	Mt Rose Bowl HOA	Conducted TMF Capacity Survey
	Comstock Mining	Training: D1 Operator Training with special emphasis on applicable safe drinking water rules & sampling (1 person, 1 system, 5 hours)
	Round Mountain PUC (Hadley Subdivision)	Training: Troubleshooting & repair of pump control valve (2 people, 1 system, 5 hours)
	Round Mountain PUC (Hadley Subdivision)	Training: Troubleshooting & repair of pump control valve (2 people, 1 system, 6.75 hours)
	Moapa Valley Water District	Training: Configuring maps for ArcGIS online (1 person, 1 system, 4.5 hours)
	Walker Lake GID	Training: Set up of chlorinator for new well & electrical control system (1 person, 1 system, 4 hours)
	Topaz Ranch Estates GID	Training: Water Math & Distribution System (1 person, 1 systems, 3 hours)
	Comstock Mining	Training: Addressing & reporting sanitary survey deficiencies (1 person, 1 system, 1 hour)
	Cave Rock/Skyland (Douglas Co)	Training: Brine preparation calculations for tracer survey (1 person, 1 system, 0.25 hour)
	Canyon GID	Training: CCR preparation (2 people, 1 system, 3.75 hours)
	City of Yerington	Training: Water quality sampling, hypochorinator tank set-up, backflow prevention (1 person, 1 system, 6 hours)
	Topaz Ranch Estates GID	Training: Water Math & Distribution System (1 person, 1 systems, 3 hours)
65	Schurz Elementary School	Training: Leak detection & water loss calculations (1 person, 1 system, 6.25 hours)
	Hawthorne Utilities	Training: CCR preparation (1 person, 1 system, 1.25 hours)
	Lovelock Meadows Water District	Training: D2/D3 Operator Certification (4 people, 3 systems, 6.5 hours)
	Lovelock Meadows Water District	Training: D2/D3 Operator Certification (4 people, 3 systems, 6.5 hours)
	Topaz Ranch Estates GID	Training: Water Math & Distribution System (1 person, 1 systems, 3 hours)
66	Washoe Lake State Park	Training: D2 Operator Certification (1 person, 1 system, 2 hours)
	Washoe Lake State Park	Training: D2 Operator Certification (1 person, 1 system, 3 hours)
	Washoe Lake State Park	Training: D2 Operator Certification (1 person, 1 system, 2 hours)
	Weed Heights	Training: Troubleshooting submersible well pump (1 person, 1 system, 0.25 hour)
	Hawthorne Utilities	Training: CCR preparation (1 person, 1 system, 3.75 hours)
	Canyon GID	Training: Laboratory sampling test results (2 people, 1 system, 1.5 hours)
	Weed Heights	Training: Pump sizing (1 person, 1 system, 0.5 hour)
	City of Yerington	Training: T1/T2 Operator Certification (2 people, 1 system, 4 hours)
	Hawthorne Utilities	Training: CCR preparation & information (2 people, 2 systems, 2.75 hours)
	Walker Lake GID	Training: CCRs, customer relations, & pressure zones (1 person, 1 system, 1 hour)
	Weed Heights	Training: Proper maintenance & operation of pumps (1 person, 1 system, 1.5 hours)
	Schurz Elementary School	Training: Distribution & treatment, reviewed primary & secondary contaminants (1 person, 1 system, 7.25 hours)
	Schurz Elementary School	Training: Distribution & treatment, reviewed primary & secondary contaminants (1 person, 1 system, 7 hours)
	Comstock Mining	Training: D1 Operator Certification (1 person, 1 system, 2.5 hours)
	Washoe Lake State Park	Training: D2 Operator Certification (1 person, 1 system, 1 hour)
	Washoe Lake State Park	Training: Tank exterior coating specifications (1 person, 1 system, 0.25 hour)
	Canyon GID	Training: CCR preparation & resolution of NOVs (2 people, 1 system, 3.5 hours)
	Canyon GID	Training: CCR preparation, sample site plan for Stage 2 D/DBP requirements (2 people, 1 system, 4.5 hours)

General Training provided by Nevada Rural Water Association (Component C)

Course Title	Date	Contact Hours	Number of Participants	Number of Systems	Locations
Seeing Clearly - Environmental Laboratory Information from Sampling to Final Reports	July 2013	3.00	49	24	Videoconference to multiple locations
The Importance of Valve Selection	August 2013	3.00	37	17	Videoconference to multiple locations
Distribution & Treatment Review	September 2013	3.00	25	19	Videoconference to multiple locations
SCADA Basics: Introduction to Building a SCADA System from the Ground Up	October 2013	3.00	54	31	Videoconference to multiple locations
Financial Management: Understanding Your Cost Structure, Customer Cost-Share Responsibilities and Funding Options	November 2013	3.00	56	24	Videoconference to multiple locations
AWWA Gate Valves, Dry Barrel Fire Hydrants, Restraints and M17 Hydrant Testing	December 2013	3.00	43	20	Videoconference to multiple locations
Competent Person Training	January 2014	3.00	47	19	Videoconference to multiple locations
Water Rights	February 2014	3.00	47	26	Videoconference to multiple locations
Get the Most from GIS	March 2014	1.00	16	10	2014 NVRWA Conference
Small System Compliance - Drinking Water Monitoring & Reporting	March 2014	3.50	68	40	2014 NVRWA Conference
Supervision & Management	March 2014	1.00	28	20	2014 NVRWA Conference
GIS for Rural Utilities	March 2014	2.25	19	14	2014 NVRWA Conference
Drinking Water Treatment Certification Review Grades 1 & 2	March 2014	2.25	52	32	2014 NVRWA Conference
Drinking Water Treatment Certification Review Grades 1 & 2	March 2014	2.25	19	14	2014 NVRWA Conference
Water Distribution Certification Review Grades 1 & 2	March 2014	2.50	54	27	2014 NVRWA Conference
Drinking Water Treatment Certification Review Grades 3 & 4	March 2014	2.00	8	7	2014 NVRWA Conference
Cross Connection Control Refresher Workshop	April 2014	3.00	38	20	Videoconference to multiple locations
Options for GIS Implementation for Rural Water Utilities	May 2014	3.00	29	17	Videoconference to multiple locations
Survey of Water Distribution System Components	June 2014	3.00	50	29	Videoconference to multiple locations

ATTACHMENT 2 – NDEP Bureau of Safe Drinking Water
Arsenic Rule Compliance Status List

	COUNTY	PWS ID#	PUBLIC WATER SYSTEM NAME	ARSENIC (ppb)	POP	STATUS
Systems Issued A Final Exemption Extensions By The State Environmental Commission in 2012						
1	CL	NV0000219	SEARCHLIGHT WATER COMPANY	11	760	
2	DO	NV0000887	SUNRISE ESTATES (a.k.a. FAIRGROUNDS)	17	91	ACHIEVED COMPLIANCE
3	EU	NV0000043	CRESCENT VALLEY WATER SYSTEM	12	350	ACHIEVED COMPLIANCE
4	HU	NV0000907	LONE TREE MINE	15	150	ACHIEVED COMPLIANCE
5	HU	NV0000162	MC DERMITT WATER SYSTEM	19	200	
6	LA	NV0000006	LA CO SEWER AND WATER DIST 2 AUSTIN	14	350	
7	NY	NV0000237	TONOPAH PUBLIC UTILITIES	13	2,600	ACHIEVED COMPLIANCE
8	WA	NV0000896	BRISTLECONE FAMILY RESOURCES	12	25	SYSTEM INACTIVATED
9	WA	NV0004021	SILVER KNOLLS MUTUAL WATER COMPANY	13	120	
10	WA	NV0003000	VERDI SCHOOL	13	250	ACHIEVED COMPLIANCE
Systems Working to Achieve Compliance Under an NDEP Enforcement Approach						
1	CH	NV0000303	OLD RIVER WATER COMPANY	32	300	AOC
2	CH	NV0000055	TOLAS WATERWORKS	35	110	AO PENDING
3	CH	NV0000058	WILDES MANOR	20	70	AO PENDING
4	CL	NV0000149	DESERT PARADISE MHP	13	70	AOC
5	CL	NV0000109	EQUESTRIAN ESTATES CO OP WATER ASSOC	36	108	AOC
6	CL	NV0000319	ROARK ESTATES	18	62	AOC PENDING
7	NY	NV0005028	SHOSHONE ESTATES WATER COMPANY	30	240	AOC PENDING
8	WA	NV0005061	VERDI BUSINESS PARK WATER CO-OP	15	100	AOC
Systems Working to Achieve Compliance Under Other NDEP Approaches						
1	EL	NV0000928	LAMIOLLE VALLEY PLAZA	24	25	

Note: AO = Administrative Order
AOC = Administrative Order on Consent